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| 1 | 101 | (sphagnum with moss) not peat | USPAT; US-PGPUB | 2003/04/21 16:01 |
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| 7 | 4 | ((sphagnum and moss) and binder) | DERWENT | 2003/04/21 16:16 |

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LEVEL 1 - 16 OF 61 STORIES

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The Vancouver Sun (British Columbia, Canada)

February 11, 1999, FINAL

SECTION: News; A1 / Front

LENGTH: 1284 words

HEADLINE: Burns bog: the making of a rare environment

BYLINE: Larry Pynn

BODY:
Five thousand years ago, the place we know as Burns Bog -- the 4,000- hectare "lungs of the Lower Mainland," named for its unique ability to absorb greenhouse gases -- was just taking its first tentative breaths.

In the thaw of the last ice age, the Fraser River was carving out its escape route, winding inexorably through the Fraser Canyon and Fraser Valley and on to freedom on the shores of the Pacific Ocean.

And as the river grew, so did its delta, accumulating layers of sediment that would incubate the first sedges, a family of flora once used by the Egyptians for papermaking and the Coast Salish natives for mats and baskets.

As these sedges continued to grow and die, creating a base of rotting vegetation, they combined with poor drainage from the underlying layer of clay to create perfect conditions for sphagnum moss -- the living foundation of a bog.

The sphagnum moss built upon itself over the millennia to create peat, and the bog grew to resemble a raised dome or inverted saucer -- about five to six metres above mean sea level in the middle, one to two metres on the perimeter.

In this acidic and nutrient-poor environment evolved a strange assortment of species. Among them:

- The narrow-leaved cotton grass, which employs a snorkel technique, relying on large, air-filled cells in its root base to survive against oxygen deprivation.

- The carnivorous sundew, which obtains nitrogen by catching and devouring insects on its sticky leaves.

- The flightless, copper- coloured Beller's ground beetle, discovered in Burns Bog just three years ago and a candidate for listing under the U.S. Endangered Species Act.

Forced to eke out an existence under these poor conditions, bog trees grew extremely slowly, their retarded size and girth no indication of their age. One felled Sitka spruce with a diameter of 80 centimetres proved to be 515 years old, while a shore pine measuring just 30 centimetres in diameter was 125

years old.

In more recent history, sphagnum peat moss has been used as an absorbent for bandages during the First World War, has served as menstrual pads for women and diapers for aboriginal children. Peat has also been mined in Burns Bog since the 1930s for horticultural purposes -- it not only breaks up clay soils and maintains water in summer, but is ideal for acid-loving rhododendrons and azaleas

Bogs are so absorbent, in fact, that they represent one of the few places where even non-believers can walk on water; composed of up to 98-percent water, they remain buoyant enough to support a soggy hiking boot.

The unique ability of the bog to quickly absorb huge amounts of rain -- its primary source of water -- while filtering it out slowly as groundwater, also makes it an efficient, natural flood-control system.

But bogs are capable of guzzling more than water. They are described as carbon sinks or lungs, storing vast amounts of greenhouse gases that would otherwise contribute to global warming.

In the United Kingdom, bog preservation is a far bigger environmental issue than in B.C. A report by University of London professor Edward Maltby suggests peatland may represent 20 per cent of all carbon stored in the world's soils, and more than three times that stored in the world's tropical rainforests.

But Maltby warns of the potential consequences of draining bogs and mining peat, which not only removes the bog's ability to act as a carbon sink but releases greenhouse gases that have accumulated over the long term.

Studies in Sweden and Finland, he noted, showed increased levels of mercury and lead in lakes adjacent to drained peat bogs. "Accumulation through the food chain can rise to toxic concentrations in algae, shellfish and in other invertebrates and in food," he warned.

Another study by the National Centre for Atmospheric Research in Boulder, Colo., highlighted the mutually beneficial relationship between oceans and bogs.

The chemical makeup of sphagnum peat bogs is such that they benefit from sulphur evaporating off the ocean and falling back to Earth as rain, the study said. In return, iron organics released by the bog through groundwater or streams return to the ocean to stimulate phytoplankton productivity near shorelines.

Scientists are also quick to exploit bogs as living libraries. The pollen, plants and wood neatly preserved below speak volume about past volcanic activities, climates, and vegetation, key information in the study of climate change.

With some of the world's best-preserved archaeological specimens also found in peat, including several human bodies more than 2,000 years old in Europe, it's anyone's guess what, or who, lurks in the seemingly bottomless pits of Burns Bog.

The Vancouver Sun (British Columbia, Canada) February 11, 1999, FINAL

And with the population of Greater Vancouver rapidly approaching two million, the bog increasingly serves as a refuge for wildlife, including the greater sandhill crane and an estimated dozen black bears -- perhaps the most unique population in North America, completely enclosed by a metropolis.

Despite all the benefits of bogs, urban man has treated them with disrespect. Burns Bog has been diked, stripmined for peat, planted with commercial cranberry crops, scorched by brush fires and used as a dumping ground for Greater Vancouver garbage -- another 10 million tonnes over the next 40 years.

And now the bog faces perhaps its biggest challenge. Under a plan unveiled earlier this week, 1,200 hectares of the bog would be donated for conservation in exchange for a \$25-million government loan and an agreement giving Delta Fraser Properties the right to develop another 890 hectares for housing, industry and a theme park on the north side that would provide a new home for the Pacific National Exhibition.

(The bog is bounded by the Fraser River to the north and west, Highway 91 to the east, and the Highway 99 freeway to the south.)

To scientists, the proposal is a risky one. Beyond the daunting engineering challenge of building on such a spongy surface vulnerable in earthquakes, there are concerns that such a major development could actually kill the bog by inadvertently altering the hydrology or some other key feature.

Studies show the bog is capable of regenerating sphagnum moss in mined areas in 50 years, which compares with 250 years to regrow an old-growth forest. But there is no guarantee the ecosystem could recover from large-scale developments that alter the hydrology of the bog.

James Bergdahl is a Seattle-based consultant who has done contract work for the B.C. environment ministry, who serves as a research associate with the Royal B.C. Museum in Victoria and who discovered the bog's Beller's ground beetle.

He observes that in Puget Sound, bogs constitute only two per cent of wetlands and deserve the highest form of protection. That governments in Canada do not appreciate the treasure they have in Burns Bog, and have, in fact, turned the place into the largest municipal landfill west of Toronto is incomprehensible to him.

"It's like putting garbage in your ground water. The people of Vancouver shouldn't take Burns Bog for granted."

As for the impact of severing a huge slice off the lungs of the Lower Mainland, Bergdahl explains that bogs are complex, little-understood ecosystems. Without detailed hydrology, chemical and soil studies, it is impossible to hazard a guess at the outcome or whether the bog can survive at all.

All he knows for sure is that Vancouver has the largest, most dramatic sphagnum peat bog in the region, one that cannot be replaced if mistakes are made. "Burns Bog is extremely rare, a relic of history, one of the most ancient habitats in our landscape today."

GRAPHIC: G Graphic Diagram: The growth of a raised bog over 10,000 years.

LOAD-DATE: February 16, 1999

LEVEL 1 - 20 OF 61 STORIES

Copyright 1998 Western Morning News
Western Morning News (Plymouth)

October 12, 1998

SECTION: Pg.

LENGTH: 1128 words

HEADLINE: General

BODY:

JANUARY: A bride on her wedding day looks radiant - though her transport is somewhat unusual. Clad in a beautiful satin gown and flowing veil, she is pictured riding tandem with her bridegroom through the streets of Plymouth. Gwendoline Pinnick, now wed to Sgt Charles H. de la Korriene Quinnell RM, is a founder member of Plymouth Cyclists Touring Club, and the ceremony at St Andrew's is the result of the couple's mutual hobby. The bride's present from her husband is, of course, a new bicycle.

FEBRUARY: An "alleged sea lion" visits the clifftops of Bude and poses naturalists a puzzle. The creature barks viciously, and coastguards are called to give it a breakfast of fish and coax it back down to the sea. But it's the nature of the beast that has a seal expert at the marine laboratory scratching his head. Shown a photo, Mr Steven pronounces that the front end seems a perfect grey seal, while the hindquarters rather resemble a sea lion. But, he adds, you would not usually find sea lions in the Atlantic - their habitat is in the Pacific, notably on the coast of California.

MARCH: Cornish gardeners are enjoying notoriety in London after sending magnificent blooms to the Royal Horticultural Show. Lt Col Pinwill, of Probus, wins a Lingley Medal for his pink magnolia Cambellii, which "astonished and delighted" visitors. Messrs Gill, of Penryn, who staged the magnolias, also scoop an award - the Flora Medal - for their "brilliant collection" of rhododendrons and anemones; and there are Cornish winners from Coverack and St Keverne.

APRIL: For the first time in the history of the British Navy, naval boys from harbour training ships HMS Carlisle and Caradoc at Devonport receive Easter eggs when they go off on leave. Each has a travelling pack include a large pasty, fruit and a chocolate egg. The idea came from one of the officers and it's wondered whether it will become common practice throughout the service. Could this be the case of the chocolate sailors?

MAY: A bus strike in Plymouth is spreading - as the month opens it's reported that Western National drivers and conductors in North Devon, Taunton and West Cornwall are likely to follow the action. Torpoint and Liskeard are already out and mass meetings are being called at other depots in a row over pay and hours which is likely to bring services to a halt across a wide area. Strike representatives have put proposals to a company director but so far no agreement has been reached.

JUNE: The Lord Mayor of Plymouth sends his regrets to the Devonport Commander in Chief after the terrible sinking of the Thetis while on trials in Liverpool Bay. More than 90 officers, men and civilians have lost their lives on the new

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submarine, and relatives, numb with tension, have endured three days waiting to hear if their men are alive. Many wives and mothers in the Westcountry are devastated - Mrs Caroline Hole of Devonport, whose husband is a stoker on the Thetis, has received a telegram from Gosport stating that W. T. Hole is believed to have died in the disaster. The couple have a month-old baby - and poignantly, the day she receives the shattering news is their first wedding anniversary.

JULY: "Mummy, I have found a picture of Papa," says and excited Princess Elizabeth to the Queen. They're visiting Dartmouth's RN College, and Elizabeth and her sister, wandering off on their own to the quarter-deck, have found a picture of King George as a naval cadet 30 years ago. But another aspect of his time at the college is to remain a mystery - all cadets, though it's against regulations, like to climb to the rafters 40 feet above the Great Hall. Had His Majesty climbed, enquired the Queen of an officer. Despite her delightful smile, the officer, true to the tradition of the "Silent Service", replies that he cannot reveal the secret.

AUGUST: "A gross insult to the dead and an affront to the Royal Marines..." Less than a month before war breaks out, the Services and Plymothians are outraged to find the Royal Marines' war memorial on the Hoe daubed with red paint during the night. Symbolic figures have been painted out, but worst of all, on the front of the pedestal, emblazoned in large letters, is "Heil Hitler" and a crudely drawn swastika. The perpetrators must have been very determined - not only did they have to work in the dark on a 20ft-high figure, but they had to climb the spiked railings surrounding the memorial.

SEPTEMBER: Thousands of evacuee children are arriving in the Westcountry, and many from London are pictured at Exeter's Central Station. Among heaps of bags, cases, backpacks and parcels, youthful faces are caught on camera - some smiling and confident, others wistful or confused. One young lad, pictured arriving at St Austell, strides manfully from the station with a huge parcel, but his sister, sucking one finger, is looking a little tired and tearful, a long way from home.

OCTOBER: The Hon Mrs Trefusis, organising a depot in Exeter for the Red Cross, recalls the uses of sphagnum moss during the Great War. Living then in Chagford, where a group made hospital requisites for the society, the moss was gathered for its remarkable healing properties and iodine content. After being washed, it was used to fill shell dressings. The discovery had been made by a naturalist who noticed that deer who were injured during fighting would look for the moss and bury their heads in it to ease their wounds.

NOVEMBER: A reporter calls into Waterloo Flats in Plymouth to find out how pensioners live on their small incomes. Many are occupied by men who live alone and have vegetable plots to eke out their budgets. One such chap is Mr C. Hookway, whose bright flatlet is spotlessly clean and tidy - he has just finished sewing and fitting some extra curtains for blackout purposes. At 72, Mr Hookway - an ex-dockyard worker - is making a good job of managing on his 15 shillings a week. You would never guess there isn't a woman about the place, comments our reporter. The pensioner does his own cooking, shopping and housework, and there is even a vase of flowers on the table.

DECEMBER: Careless talk costs lives... next year a nationwide anti-gossip campaign will be launched, but one WMN correspondent - "Disgusted" of "Somewhere in the Westcountry"- is already ticking off a chatterbox air-raid warden who,

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after telling a friend how carefully he was suppressing lights, was sounding off in a public place about the building of an explosives magazine and where it was located. He followed up with the information that a new pier was to be built to allow the loading of goods at all states of the tide. "Is it not a pity," adds Disgusted, "that a man so conscientious with the lighting should be so careless with his tongue?"

LOAD-DATE: November 25, 1998

LEVEL 1 - 24 OF 61 STORIES

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NBC News Transcripts

SHOW: TODAY (7:00 AM ET)

October 24, 1997, Friday 12:09 PM

LENGTH: 1213 words

HEADLINE: TIPS ON INSIDE GARDENING

ANCHORS: KATIE COURIC

BODY:

KATIE COURIC, co-host:

With winter weather almost here, it's time to bring your gardening inside. Our own garden expert and also square dancer, Jeff Ball, has some ideas for doing just that.

Hi, Jeff. Good morning.

Mr. JEFF BALL (Gardening Expert): Good to see you.

COURIC: So we're not talking about just indoor house plants.

Mr. BALL: No. This is a garden.

COURIC: You know my experience with things like this.

Mr. BALL: I know. We're not going to--I know. We're not going to...

COURIC: OK.

Mr. BALL: ...that's OK, you know. Dish tops or terrariums, but they're real gardens. They're a collection of plants just like you have outside.

COURIC: Yeah.

Mr. BALL: And so for people who, you know, are now and going to be inside for the winter, and the garden...

COURIC: And who are really suffering from withdrawals...

Mr. BALL: Yeah.

COURIC: ...'cause so many people are such avid gardeners.

Mr. BALL: And for those who don't kill 'em, you know...

COURIC: Yeah.

Mr. BALL: ...then you got dish tops--can be all different kinds. You have a cactus garden.

NBC News Transcripts October 24, 1997, Friday 12:09 PM

COURIC: Uh-huh.

Mr. BALL: This is a water garden. And you can put plants in, take them out. And--and that's the big thing about all these gardens is that you--you play with them.

COURIC: OK.

Mr. BALL: You don't just set it--set it up.

COURIC: Well, let's take one at a time, and you can show us how to do them.

Mr. BALL: OK. Well, I'm just going to run through here, because I want to get to the creepy crawlies as soon as we can here.

COURIC: OK.

Mr. BALL: The water garden is--is especially fun, I think, 'cause of the sound. So, in the living room--you can't hear it with all the traffic.

COURIC: Right.

Mr. BALL: That's really kind of nice.

COURIC: Right.

Mr. BALL: I'm not really big on the--on the cactus stuff, but some people love them.

COURIC: I love cactus. Or cacti.

Mr. BALL: This one we got from Real Goods trading company out in California. This is a sealed sphere, a terrarium--plants, snails, shrimp, microbes. It will last for three years. You just sit and watch it and the little stuff swims around in there.

COURIC: Oh, that's cool.

Mr. BALL: That's--that's--I think that's really kind of neat.

COURIC: Uh-huh.

Mr. BALL: Now if you want to do it yourself, this is a terrarium. It's closed system, just like that one is. We don't have any animals in here.

COURIC: OK.

Mr. BALL: But again, it's potting soil and small plants. It doesn't have to be any special kind of plant, but a small plant. Plant it. Get it watered. Once it gets balanced, you don't have to water it any more. It'll go for months without having...

COURIC: Really? That's my kind of indoor garden, isn't it?

NBC News Transcripts October 24, 1997, Friday 12:09 PM

Mr. BALL: It's your--I think it would work for you. Yes, it would.

COURIC: OK. Do you have to use a particular kind of soil or anything?

Mr. BALL: Potting--just regular potting mix like you would for any houseplant.

COURIC: We've got three minutes. You don't have to rush quite so much.

Mr. BALL: OK. I just--but I worry about whether you know how to get the right stuff. So, yeah.

COURIC: OK. All right.

Mr. BALL: Regular potting soil. You go into a garden center and say I like that plant, I like that plant, I like that plant 'cause there's green. Don't worry what they are if they're small.

COURIC: Really? Is that true? Don't plant do better in terrariums than other--this is a noisy crowd. You all, we're trying to do a segment here. Hi.

I'm sorry.

Mr. BALL: But it's true that some plants may be happier than others. They die; you put another one in. You know?

COURIC: Uh-huh.

Mr. BALL: But most of these plants are going to be what they call low light plants. Not blossoms, even though these are gorgeous and you've got little roses and so forth. I buy these and I put them in my garden and they last about three or four weeks, and then I throw them away and buy some more.

COURIC: Uh-huh.

Mr. BALL: But the foliage plants, the green plants, they'll go for years. Now, what happens in a place like this, though, is the plants get bigger. You pull those out, put little ones back in.

COURIC: Oh, OK.

Mr. BALL: OK. So, you are going to have a garden. And we were talking about...

COURIC: So, that's the only maintenance you have to do. Do you have to water it at all?

Mr. BALL: You're going to water it probably every two to three months, just a little bit, 'cause you want to put a little fertilizer in it. Just a little bit of fertilizer.

COURIC: But basically, it's just the humidity within the terrarium that keeps things thriving in...

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Mr. BALL: It all--the water recycles and the plants make more oxygen. So, it sort of takes care of itself.

COURIC: Cool.

Mr. BALL: Creepy crawlies. This is one of my favorite things. This is a garden for kids. On this side, I've got a compost pile.

COURIC: Oh, lovely.

Mr. BALL: I've got dirt, I've got worms, I've got millipedes, centipedes, soil bugs, all kinds of little creatures that--and they actually turn the green stuff and brown stuff into compost. I've got crickets. And I've got ants. And over here, I've got carnivorous plants.

COURIC: Oh, yeah. I see that.

Mr. BALL: A venus fly trap...

COURIC: Uh-huh.

Mr. BALL: ...a pitcher plant. They catch--like the venus fly trap grabs the bugs. This pitcher plant, they get inside and they drown.

COURIC: Uh-huh.

Mr. BALL: Over here, they got a plant to stick 'em and then very slowly squeezes the plant, eats them up. Takes about a week. So I got a whole system.

COURIC: I didn't know you had this sadistic side to you, Jeff.

Mr. BALL: Oh, this--yeah. I got little anoles, little lizards.

COURIC: Uh-huh. Oh, cool.

Mr. BALL: They eat crickets, and they eat the ants. And so I've got a system here, a closed system where I got lots of creatures.

COURIC: Yeah.

Mr. BALL: It's for kids between six and 12 or over 55, you know? I've always wanted to have one of these.

COURIC: And what is this kind of weird goop on the--on the...

Mr. BALL: That's live sphagnum peat moss. You--you buy this--this also came from Real Goods. And they'll send you the container, the peat moss and the carnivorous plants. And you can put in something like this. But I thought this was more fun.

COURIC: That's great. And how much does this cost to put together something like this?

Mr. BALL: You're talking a regular aquarium from a--a pet store. And so that--this one I would say 20 to 25 bucks.

COURIC: And this doesn't need much maintenance either, right?

Mr. BALL: Well, again, it's how much the kid wants to play with it, OK? 'Cause one of the things he'll like to do is take a coat hanger and squish it around there and make all the creepy crawlies scare your girlfriend, or, you know, do that kind of stuff. But you can also put more plants. You can have ferns, make it almost as pretty as this.

COURIC: Yeah.

Mr. BALL: So--so this is really--it's a kids' toy more than a garden.

COURIC: Yeah. And...

Mr. BALL: But it's sort of a garden, too.

COURIC: And teaches a lot, too.

Mr. BALL: And these carnivorous plants live for years and years and years.

COURIC: Oh.

Mr. BALL: I mean, we're not talking--they're--you take care of them, they'll go for three or four or five years. That's a lot of flies.

COURIC: OK, Jeff. Jeff Ball. Thanks, Jeff. Have a good weekend. Good to see you.

Mr. BALL: You, too.

COURIC: Up next, the latest in wild animal prints. But first, this is TODAY on NBC.

LOAD-DATE: October 25, 1997

Copyright 1985 Chicago Tribune Company
Chicago Tribune

June 28, 1985 Friday, SPORTS FINAL EDITION

SECTION: FRIDAY; Pg. 66; ZONE: CN

LENGTH: 1146 words

HEADLINE: PLANTS WITH A TASTE FOR MEAT MAKE CAPTIVATING HOUSEPLANTS

BYLINE: By Charles A. Levine.

BODY:

Perhaps the thought of carnivorous plants brings to mind visions of Cleopatra, the African Strangler from the television show, "The Addams Family." Well, rest at ease. No such plant exists.

There are, however, several other carnivorous plants worthy of attention. Although they are much smaller than the fictional African Strangler, they are just as interesting.

The most commonly encountered carnivorous plant is the Venus Fly Trap, *Dionea muscipula*. It so captivated its discoverer, the American botanist John Bartram, that he called it a "miracle of nature" when he encountered it in 1765.

Actually, there are carnivorous plants available for indoor cultivation. They are both beautiful and bizarre. Several are relatively easy to grow when their special requirements are met.

The majority of carnivorous plants are native to wet, warm and humid areas such as bogs, swamps and marshes, often where few other plants will grow. The soil in these areas tends to be highly acidic with few nutrients available.

To survive in these adverse environments, carnivorous plants have evolved as a highly diverse and specialized group with unusual ways to obtain their nutrients.

The Venus Fly Trap and its aquatic cousin the Water-Wheel plant *Aldrovanda vesiculosa*, possess active traps that snap shut on unsuspecting insects or small water creatures. The so-called Sundews or Rainbow plants *Drosera* spp. have leaves covered with sticky tentacles. When an unwary insect wanders across the leaves it becomes stuck. The tentacles slowly fold over it and digest the insects' nutritious body fluids.

A similar mechanism is used by the beautifully flowered Butterworts *Pinguicula* spp. These plants have flat, greasy, flypaper-like foliage that traps small insects. The leaves curl up around the entrapped insect until digestion is complete.

The Pitcher plants *Darlingtonia californica*, *Nepenthes* spp. and *Sarracenia* spp. have evolved tubular pitcher-shaped leaves. The "pitchers" are partially filled with a fragrant nectar attractive to insects. Unsuspecting insects crawl into the pitchers to find there is no way out. Subsequently they fall into the nectar, drown and are digested by enzymes in the fluid.

If the idea of growing these plants still intrigues you, here are some guidelines to their culture.

Carnivorous plants are ideal terrarium inhabitants. Their culture in the terrarium (a 5- to 10-gallon aquarium is best) provides the ideal humid

Chicago Tribune, June 28, 1985

environment. It will simulate as closely as possible their natural bog habitats.

Temperate plants (those that naturally occur in colder climates such as ours) include the Pitcher plants *Sarracenia* ssp. and Sundews, *Drosera* ssp. These require a dormant period. They should be removed from the terrarium from late fall until spring, as forced growing during this time will result in the death of the plants.

Beginners should concentrate on tropical species. This will avoid the sometimes confusing winter-chilling requirements of temperate-zone plants. Plants to try include: Venus Fly Trap; Sundews *Drosera adelae*, *D. Capensis*, *D. spathulata*; Butterworts *Pinguicula caudata*, *P. gypsicola*, and the temperate Purple Pitcher plant *Saracenia purpurea*.

The so-called Cobra Lily, *Darlingtonia californica*, is widely sold as a novelty and is difficult to maintain in the home. The Cobra Lily requires cool temperatures in addition to high humidity.

The soil recommended for these plants is made up of living or dried long fiber shredded sphagnum moss to a depth of five inches. Live sphagnum moss is available from any of the nurseries that specialize in carnivorous plants.

An alternate soil mix can be made by mixing two parts fine silica sand to one part Canadian peat moss. The soil should be moistened prior to placement in the terrarium. The sphagnum and peat moss are easily moistened by soaking in hot water. Any excess water should be squeezed from the wet moss.

These plants require pure water, preferably distilled, deionized or rain water. The moist sphagnum moss will take on a light brown color when wet; when in need of water it will turn light tan. The light brown color should be maintained at all times.

It is not unusual for dried moss to "come alive" and grow after a brief period of time. The soil is too wet when standing water results when a finger is pressed into the soil.

Outdoors, most carnivorous plants grow in full sunlight, but this may cause burning to terrarium-grown plants. Placing the terrarium near an east or west window will do.

Best results are obtained by growing the plants under artificial light. Any two-tube fluorescent light (such as cool-white or Gro-Lux) will work well. These may often be purchased quite inexpensively as shop lights for about \$14 at most hardware or discount stores. The plants should be placed about 10 to 12 inches below the light for best results.

Carnivorous plants may occasionally be "fed." Flies and other small insects added to the terrarium will find their way into the traps of the plants. Care should be taken not to overfeed the plants nor should they be fed raw meat as this may result in the leaves rotting and may eventually kill the plant.

Several carnivorous plants are native to Illinois. Unfortunately most of these are rare, due primarily to habitat destruction and overcollection. Love Nest Sundew *Drosera intermedia* is listed on the state threatened plant list, with four species, the Round Leaved Sundew *Drosera rotundifolia*, and the aquatic Bladderworts, *Utricularia cornuta*, *U. intermedia* and *U. minor* being listed as endangered in Illinois.

Obviously, wild plants should not be collected and may in fact be against the law.

There are many excellent sources for plants and supplies. Two of them are World Insectivorous Plants, 2690 Indian Lake Dr. N.E., Marietta, Ga. 30062 and Peter Pauls Nurseries, Canadaigua, N.Y. 14424.

Further information may be obtained by referring to "Plant Facts: Cultivation of Carnivorous Plants," available by sending 50 cents and an

Chicago Tribune, June 28, 1985

addressed, business-size envelope to Plant Information, Chicago Botanic Garden, P.O. Box 400, Glencoe, Ill. 60022. In addition, an excellent book on the subject is "Cultivating Carnivorous Plants" by Allen Swenson (Doubleday & Co.). This book is out of print, although several copies are available at the Chicago Botanic Garden library.

The International Carnivorous Plant Society publishes a illustrated quarterly newsletter. Information can be obtained by writing: ICPS, the Fullerton Arboretum, Dept. of Biology, California State University, Fullerton, Calif. 92634.

GRAPHIC: GRAPHIC

GRAPHIC: (Facts about the Pitcher Plant.) Tribune photo by Ron Bailey.

LOAD-DATE: September 16, 1993

COPYRIGHT 1984 THE CHRISTIAN SCIENCE PUBLISHING SOCIETY
Christian Science Monitor (Boston, MA)

February 7, 1984, Tuesday

SECTION: Home & Family; Ask The Gardeners; Pg. 34

LENGTH: 676 words

HEADLINE: Shrubs that beautify the landscape - and grace the dinner table

BYLINE: By Doc and Katy Abraham, Special to The Christian Science Monitor; Doc and Katy Abraham are nationally known horticulturists, authors of several books on gardening, and greenhouse operators for more than 25 years.

BODY:

Q We want to renew the landscaping around our house and include some shrubs with edible fruits. Are there any dwarf fruit-producing shrubs that can be tucked in with the rest of the planting?

Hansen bush cherry, which can be pruned to stay three to four feet tall, has white blooms in the spring that produce fine-tasting, glossy, dark-purple fruit in summer.

Currants and gooseberries, with bushes three to four feet, are good for pies and jellies. They may be restricted in some areas near white pine plantings because they are hosts for pine rust.

Blueberries are handsome, not only for berries but for fall color. If the soil is not naturally acid, it must be regularly acidified with one of several products for this purpose.

Dwarf varieties just introduced at the North Central Experiment Station at Grand Rapids, Minn. 55744, now make it possible to have dwarfs especially suited for foundation plantings around homes. Northblue grows to two feet, and Northsky remains about 15 inches at full growth.

Q Is there a difference between "dried sphagnum" and "sphagnum peat moss"? I had thought they were the same until I saw a recent reference implying they were entirely different.

Dried sphagnum is a moss collected live from bogs, then cleaned, dried, sterilized, and sold as milled sphagnum (shredded), unmilled sphagnum, sheet moss, or long-fiber sphagnum.

Sphagnum peat moss is the same plant, partially decomposed. Both stages of this type of peat moss have anti-damping-off properties that make excellent materials for starting seed and propagating plants from cuttings or by means of air-layering.

Q We have had several piggyback plants. They do nicely for a while, then the leaves start turning brown along the edges. Usually this happens in the fall. We always have them in our northeast bay window. There is a baseboard radiator under the window, and temperatures never go below 68 degrees F. (20 degrees C.). We can find no insects, and we've tested for spider mites by your method of putting a white paper under the leaves and tapping them with a pencil to see if crawling specks fall on the paper.

Chances are the browning is due to dry air. After the heat is turned on in fall, the warm air rising from the radiator is not moist enough for this humidity lover.

The soil should be kept moist (but not soggy) at all times, with a half-strength liquid feeding about once every two months.

Piggyback (Tolmiea) is native to the West Coast. From California to Alaska it thrives in the wild state in the cool, moist, shaded areas under tall trees. When grown as a houseplant, it prefers a night temperature of 40 to 50 degrees F. (4-10 degrees C.) and 68 to 75 degrees F. during the day.

In its native habitat the piggyback is exceedingly hardy. Its common name alludes to the growth of little plantlets in petioles of the old leaves. This plant is also called youth-on-age.

Q Our family is very fond of lentils in soups and stews. Is it possible to grow them in our home garden? We cannot find them listed in any seed catalog.

According to Avant Gardener, a newsletter put out by Thomas and Betty Powell, PO Box 489, New York, N.Y. 10028, lentils are now being grown commercially in Washington and Idaho. Chilean is the most common variety.

Two improved cultivars, Red Chief and Brewer, have been released by Washington State University at Pullman, Wash. 99164. But according to the Powells, no seed company is yet handling them. However, seeds sold for cooking can be used for planting. They are legumes, so would sprout better with an inoculant (available at garden stores or seed houses). Ask for one used for peas or beans.

Nitrogen fertilizer is not used, but they need a well-drained soil and want cool growing conditions (as do peas) so should be sown as early in the spring as the soil can be worked. Sow 1 inch deep and 3 inches apart.

If you have a question about your garden, inside or out, send it to the Garden Page, The Christian Science Monitor, One Norway Street, Boston, Mass. 02115.